

## ABHILASH BISWAS

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### EDUCATION

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**Carnegie Mellon University, Pittsburgh, PA**

**Pittsburgh, PA**

*M.S. in Public Policy and Data Analytics (GPA: 4.00/4.00)*

*Aug 2021-May 2023*

- Coursework: Causal inference, Machine learning, optimization, AI ethics and fairness, policy, and management

**St Stephen's College, University of Delhi**

**New Delhi, India**

*B.A. Economics*

*Jul 2014-May 2017*

- Graduated with rank 1 out of 100 students in the Department of Economics

### TECHNICAL SKILLS

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**Programming:** Python, SQL, AWS, R, STATA, SurveyCTO

**Tools/packages:** PyTorch, Scikit-Learn, PySpark, OpenCV, Scikit-Image, GurobiPy, R Shiny

**Statistics and ML:** Supervised and unsupervised learning, Randomized Control Trial, A/B testing, probability theory

### PROFESSIONAL EXPERIENCE

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**eScience Institute, University of Washington**

**Seattle, WA (Remote)**

*Data Science for Social Good summer fellow*

*Jun 2021-Aug 2023*

- [Developed a python library](#) to detect and quantify bright satellite streaks affecting astronomical images
- Applied **computer vision techniques** on noisy astronomical images from earth-based telescopes to create tools for astronomers to quantify the magnitude of the issue

**IDinsight** (website [here](#))

**New Delhi, India**

*Manager (10 months), Senior Associate (1 year), Associate (2 years)*

*Aug 2017-May 2021*

**Key Responsibilities:** Project Management, Large scale data collection, Quantitative and qualitative data analysis, Innovations in sampling methods, Innovations in remote surveying, Client management

**Highlight:** Co-founded [Data on Demand \(DoD\)](#) – a Strategic Business Unit housed within IDinsight that uses technological innovation to make high quality data accessible to policymakers

- Led DoD's **technical plan** to expand collection of low-cost ground-level data for policymakers across all Indian states
- Led the product team to develop **scalable software systems** for pan-India data collection management
- Led [agile workflow based innovations](#) to develop remote data collection capabilities used to provide [real time data](#) to the central government of India, World Bank, and the Gates Foundation during COVID-19 lockdown
- Supervised a team of 20 centrally located and 500 decentralized members to provide [statistical evaluation support](#) to government of India's flagship welfare program

### PROJECTS

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**Helping Johnson County predict people in need of proactive mental health services.** Presentation [here](#).

- Implemented an **end to end machine learning pipeline** containing analytical formulation, data preprocessing from multiple county datasets, supervised models, **temporal validation**, **bias/fairness audit** and field trial design
- Collaborated (in progress) with the county to deploy the model and improve it based on feedback from the field

**Predicting police violence in Chicago.** Presentation [here](#). GitHub repo [here](#).

- Created **classification and unsupervised models** using Census, citizen reported data and Chicago city's open data to predict chances of police violence at a Census tract level in Chicago.

**Optimizing placement of a new grocery store in Pittsburgh to minimize food insecurity.** GitHub repo [here](#)

- Applied **constrained optimization and geospatial analysis** to find the store location that can maximize food access.

**HealthAccess – a proof of concept app to find nearest hospitals.** GitHub repo [here](#).

- Deployed python-based **web scraping, API extraction and text pattern matching** to provide curated information on nearby healthcare facilities to users seeking medical help.

**Analyzing trends in 2021 Myanmar Coup.** R markdown file [here](#).

- Used census and citizen reported data to analyze the characteristics and trends in civilian detainment, imprisonment, and death during the coup.